

TIMBER GRADE AND GRADING METHOD

The industry produces a standard line of products and they are graded according to their properties prior to marketing. The specification will make use of designated grades to enable builders to order appropriate materials. The grade is the product description.

Appearance grades

Appearance grading is the process of sorting timber into groups based entirely on the appearance of the surface of the timber. Some timber used in buildings will make use of this type of timber. This may include:

- Flooring and panelling
- Items for stairs: handrails, balusters, balustrades, stringers, and treads.
- Joinery and architectural trim: picture rails, architraves, skirting boards, shelves, door and window frames and hardware, fireplaces.
- Cabinets: built in cupboards, benches, furniture

Some suppliers may have their own grade categories (eg “colonial”) that are not described in the Australian standard. If specifying these products, the grade must be described by the grading standard used to classify them.

Species and/or colour can also be important in defining the appearance product required.

Appearance graded timber is not often stamped. (That would detract from its appearance!) Instead, a grade certificate can be issued, and is often tucked into the pack of timber. For small orders, a copy of the grade certificate would have to be specifically requested in the specification if it was important for the quality control of the job.

To grade according to appearance, the timber is carefully examined by a trained grader for the presence of growth characteristics such as large or loose knots, for production degrade effects such as splits or cracks, and for cup, bow, spring and warp or twist. The timber can be sorted as to the severity of any of these characteristics in each board. In general, the most severe of any of the appearance characteristics in the appearance grades will govern the grading of the timber.

Note – A structural grading method introduced in Structural grading known as ‘visual stress grading’. This is a different process, in which trained graders identify structural characteristics by looking at the timber.

Appearance grade products are usually used whenever timber is

- Touched
- Closely viewed
- Part of the character of the structure or building
- Turned, carved etc.

Appearance grading standards

AS2796 Timber – Hardwood – Sawn and milled products

AS4785 Timber – Softwood – Sawn and milled products

For more information visit the following website:

<http://www.timber.org.au/NTEP/menu.asp?id=80>

Structural grades

The most commonly used structural grades in Australia are:

- F-grades – for both hardwood and softwood timbers. F-graded timber can be graded visually, by machine or proof graded, and may be used for structural or non-structural applications.
- MGP grades – machine graded pine (softwood only). Generally structural timber.
- GL grades – Glulam grades
- special grades – LVL material has an individual grade, unique to each manufacturer

Relevant Australian standards are the following:

<AS/NZS 1748: 2003> Timber Stress-graded - Product requirements for mechanically stress-graded timber

<AS 2082: 2003> Visually stress-graded hardwood for structural purposes

<AS 2858: 2003> Timber - softwood - visually stress-graded for structural purposes

<AS 2878> Timbers - classification into strength groups

<AS 3519> Timber - Machine Proof Grading

The grade and grading method both need to be called up in a specification. Structural timber is generally stamped. The stamp shows both the awarded grade and the grading method (Australian Standard for the graded product).

Timber should be selected from the grades that are available locally. For example, in many parts of Australia, *radiata* pine is available in MGP grades and also in F-grades. However, some local suppliers may only carry MGP *radiata* pine. Also, in

most places, the highest grade available for unseasoned hardwoods is F17, or maybe F22, in spite of the fact that the design standard may show grades as high as F34.

All designers should check availability of grades in the range products that may meet the other functional requirements.

Stress Grades

Stress grades are only used for structural timber products. Appearance grades are not stress grades.

In the recent past, F-grades have been the common timber grade designations. Over the past 15 years, other grade designations have been derived for in-grade tested pine (MGP grades), Australian Ash (A-grades), engineered products such as glulam (GL grades), plywood and LVL (which both have their own independent grades).¹

For more information about grading visit the following website:
<http://www.timber.org.au/NTEP/menu.asp?id=108>

¹ Notes taken from [timber.org.au](http://www.timber.org.au) educational resource website